UNITED STATES PATENT OFFICE.

WILLIAM V. BRIGHAM, OF NEWTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO MRS. H. S. C. BRIGHAM, OF SAME PLACE.

MANUFACTURE AND ORNAMENTATION OF SHEETS OF GELATINE.

SPECIFICATION forming part of Letters Patent No. 233,973, dated November 2, 1880.

Application filed March 9, 1878.

To all whom it may concern:

Be it known that I, WILLIAM V. BRIGHAM, of Newton, in the county of Middlesex and State of Massachusetts, have invented a new and useful Process for the Manufacture and Ornamentation of Sheets of Gelatine, Collodion, and analogous substances, which process is fully set forth in the following specification.

This invention relates to the ornamentation of sheets of gelatine, collodion, and analogous substances; and it consists in manufacturing them on surfaces on which a design has been previously produced by an alteration in the character of certain portions of the surface.

In carrying out my invention I take glass or other suitable substance on the surface of which a design has been produced by any of the well-known methods—such, for instance, as etching or the sand-blast process—and having placed it in a level position cover it with a solution of gelatine, collodion, or analogous substance, to which, if desired, coloring-matter has been added. When dry the sheet of gelatine, collodion, or analogous substance, which I shall hereinafter call the "film," is stripped from the glass, having on its surface an exact reproduction of the surface over which it has been flowed. For instance, if the surface of the glass was perfectly plain and smooth the surface of the film will be perfectly plain and smooth.

If the glass used is made translucent by grinding the surface on which the film is made, then the film will be translucent also, presenting a ground surface similar to the surface of the ground glass, so that the surface of the film is always a reproduction or fac-simile of the surface on which it is made, and by a combination of the two surfaces mentioned pictures and other designs may be produced on the surface of the film.

Any of the well-known means may be employed for facilitating the removal of the film from the surface on which it has been prepared—such, for instance, as oiling or waxing the surface or smearing it with ox-gall; and it is to be understood that I do not confine myself to glass, but may use stone, iron, slate, zinc, copper, or any other material on the surface of which a suitable design can be prepared; nor do I confine myself to gelatine and collodion, which may be varied by the addition or substitution of other substances, such as glue, albumen, dextrine, gum, one or more of them, and when desired I make compound films, composed of two or more layers of gelatine, collodion, and analogous substances. Sometimes, also, I form the designs by moistening the films and attaching them while wet to the surface bearing the design. When dry they are stripped from this surface, having substantially the same result as above described. Sometimes, also, I vary the process by rubbing the surface on which the design has been produced with coloring-matter in powder, which will adhere to the ground surface, but not to the plain surface, and then making the film of another color or without color, in which case the result will be a contrast of color as well as transparency, or by flowing a small quantity of gelatine of one color over glass prepared by etching or engraving, and removing the superfluous gelatine beyond what is sufficient to fill the depressions in the glass. A second film of another color is then placed on the first, with which it coheres. Sometimes, also, I back up the films with paper or other suitable material, either white or colored.

I am aware that plain sheets of gelatine of various colors are in use for decorative and printing purposes; but by means of my invention I am able to prepare such sheets having designs or ornaments of any required kind printed on them without extra cost of manufacture.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The method herein described of producing designs on gelatine, collodion, or analogous sheets, by flowing a film of the same upon glass or other suitable surface previously prepared by etching or by other means with the requisite design, and when sufficiently dry de-

taching the same, substantially as set forth and described.

2. As an article of manufacture, sheets of gelatine, collodion, and analogous substances having designs on them produced by flowing a film of the same upon glass or other suitable surface previously prepared by etching or by other means with the requisite design, and when sufficiently dry detaching the same, substantially as set forth and described.

WM. V. BRIGHAM.

Witnesses:

DONALD RAMSAY,

G. F. MORRIS.